



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0678; Directorate Identifier 2011-NM-285-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 747-400, and -400F series airplanes. This proposed AD was prompted by multiple reports of integrated display unit (IDU) malfunctions and mode control panel (MCP) malfunctions. This proposed AD would require installing new software, replacing the duct assembly with a new duct assembly, making wiring changes, and routing certain wire bundles. We are proposing this AD to prevent IDU malfunctions, which could affect the ability of the flight crew to read primary displays for airplane attitude, altitude, or airspeed, and consequently reduce the ability of the flight crew to maintain control of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Ana Martinez Hueto, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6592; fax: 425-917-6591; e-mail: ana.m.hueto@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0678; Directorate Identifier 2011-NM-285-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received reports of IDU malfunctions and MCP malfunctions on Model 747-400, and -400F series airplanes. The reports range from a single display malfunction to all six primary IDUs going blank with an MCP malfunction, during various flight phases. Moisture in the flight deck cooling supply air could cause the IDU to blink, lose focus, or display in monochrome and the MCP to go blank. This condition, if not corrected, could affect the ability of the flight crew to read primary displays for airplane attitude, altitude, or airspeed, and consequently reduce the ability of the flight crew to maintain control of the airplane.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011. This service information specifies installing new integrated display

system (IDS) software, replacing the duct assembly with a new duct assembly, making wiring changes, and routing certain wire bundles.

Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011, refers to Boeing Service Bulletin 747-31-2426, dated July 29, 2010 (for airplanes with Rolls-Royce engines); Boeing Service Bulletin 747-31-2427, dated July 29, 2010 (for airplanes with General Electric engines); and Boeing Service Bulletin 747-31-2428, dated July 29, 2010 (for airplanes with Pratt & Whitney engines); as additional sources of guidance for installing certain IDS 508 software in each of the six IDUs and in each of the three EFIS/EICAS interface units (EIUs)

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD affects 33 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace duct assembly and do wiring changes	41 work-hours X \$85 per hour = \$3,485	\$20,121	\$23,606	\$778,998
Software change	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$8,415

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2012-0678; Directorate Identifier 2011-NM-285-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-400 and -400F series airplanes; certificated in any category; as identified in Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 21, Air Conditioning.

(e) Unsafe Condition

This AD was prompted by multiple reports of integrated display unit (IDU) malfunctions and mode control panel (MCP) malfunctions. We are issuing this AD to prevent integrated display unit (IDU) malfunctions, which could affect the ability of the flight crew to read primary displays for airplane attitude, altitude, or airspeed, and consequently reduce the ability of the flight crew to maintain control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Software Update

Within 12 months after the effective date of this AD: Install integrated display system software, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011.

Note 1 to paragraph (g) of this AD: Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011, refers to Boeing Service Bulletin 747-31-2426, dated July 29, 2010 (for airplanes with Rolls-Royce engines); Boeing Service Bulletin 747-31-2427, dated July 29, 2010 (for airplanes with General Electric engines); and Boeing Service Bulletin 747-31-2428, dated July 29, 2010 (for airplanes with Pratt & Whitney engines); as additional sources of guidance for the software installation specified by paragraph (g) of this AD.

(h) Replacement of Duct Assembly and Wiring Changes

Within 60 months after the effective date of this AD: Replace the duct assembly with a new duct assembly, do wiring changes, and route certain wire bundles, in

accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-21A2523, Revision 1, dated October 3, 2011.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to:

9-ANM--Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, Ana Martinez Hueto, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6592; fax: 425-917-6591; e-mail: ana.m.hueto@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced

service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on June 29, 2012.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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